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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/739,994 | 12/18/2000 | Mikael Bisgaard-Bohr | 9684 | 4293 |

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EXAMINER

NGUYEN, CINDY

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2171

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/739,994

Applicant(s)

BISGAARD-BOHR ET AL.

Examiner

Cindy Nguyen

Art Unit

2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-9, 11-17, 19-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-9, 11-17 and 19-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

Art Unit: 2171

DETAILED ACTION

This is in response to amendment filed 06/12/03.

The final rejection of 04/16/03 has been withdrawn in view of newly found reference.

The rejection follows:

1. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1, 3, 7-9, 11, 15-17, 19, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fayyad et al. (U.S 6263337) (Fayyad) in view of Lazarus et al. (U.S 6430539) (Lazarus).

Regarding claims 1, 9 and 17, Fayyad disclose: a method, an apparatus for a data structure, for analyzing data in a computer-implemented data mining system (12, fig. 2 and corresponding text, Fayyad), wherein the data structure is a data model that comprises a

Art Unit: 2171

Gaussian Mixture Model that stores transactional data (col. 9, lines 22-67, Fayyad) and the data model is mapped to aggregate the transactional data for cluster analysis (col. 8, lines 34-46, Fayyad).

However, Fayyad didn't disclose: a basket table that contains summary information about the transactional data, an item table that contains information about individual items referenced in the transactional data, and a department table that contains aggregate information about the transactional data. On the other hand, Lazarus disclose: a basket table that contains summary information about the transactional data (table 1, col. 13, Lazarus), an item table that contains information about individual items referenced in the transactional data (col. 16, lines 13-21, Lazarus), and a department table that contains aggregate information about the transactional data (col. 12, lines 50-63, Lazarus). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include summary table about transactional data, table contains information about individual items referenced data and department table that contains aggregate information about the transaction data in the system of Fayyad as taught by Lazarus. The motivation being to enable the user to group the useful information about the transactional data into subgroups and to organize data in the database.

Regarding claims 3, 11 and 19, most of the limitations of these claims have been noted in the rejection of claims 1, 9 and 17 above, respectively. In addition, Fayyad/Lazarus disclose: wherein the cluster analysis groups the transactional data into coherent groups according to perceived similarities in the transactional data (col. 8, lines 35-64, Fayyad).

Art Unit: 2171

Regarding claims 7, 15 and 23, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. In addition, Fayyad/Lararus disclose: wherein the data model is mapped into a database view to produce a correct level of aggregation for statistical analysis (col. 8, lines 34-44, Fayyad).

Regarding claims 8, 16 and 24, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17 above, respectively. In addition, Fayyad/Lazarus disclose: wherein the data model is comprised of one row per transaction in the transactional data (col. 36, lines 57-65, Lazarus). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include transaction step of one row per transaction in the transaction data in the system of Fayyad as taught by Lazarus. The motivation being to enable the user to process one transaction data at the time to avoid corruption of data by the system.

3. Claims 4-6, 12-14 and 20-22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Fayyad et al. (U.S 6263337) (Fayyad) in view of Lazarus et al. (U.S 6430539) (Lazarus) and further in view of Van Huben et al. (U.S 6327594) (Van).

Regarding claims 4, 12 and 20, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17 above, respectively. However, Fayyad/Lazarus didn't disclose: wherein the data model is stored in a relational database managed by a relational database management system. On the other hand, wherein the data model is stored in a relational database managed by a relational database management system Van disclose: wherein the data model is stored in a relational database managed by a relational database management system (col. 8, lines

Art Unit: 2171

14-65, Van). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include data model is stored in relational database in the system of Fayyad as taught by Van. The motivation being to enable the user to store data repositories managed by the data mining algorithm.

Regarding claims 5, 13 and 21, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. In addition, Fayyad/Lazarus/Van disclose: wherein the data model is accessed from a relational database managed by a relational database management system (col. 12, lines 24-50, Van). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include data model is accessed from relational database in the system of Fayyad as taught by Van. The motivation being to enable the user to access to the repositories and modify information in the relational database.

Regarding claims 6, 14 and 22, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. In addition, Fayyad/Van disclose: wherein the data model is mapped into a single flat table format to produce a correct level of aggregation for statistical analysis (col. 9, lines 66 to col. 10, lines 22, Van). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include data model is mapped into a single flat table in the system of Fayyad as taught by Van. The motivation being to enable the user to implement data model into a single format and classifying data in the table.

4. *Response to Arguments (filed 06/12/03)*

Art Unit: 2171

Applicant's arguments have been considered, but are moot in view of the new ground(s) of rejection.

5. Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Medl; Robert E. (US 6108004). GUI guide for data mining.

Pham et al. (U.S 5970482). System for data mining using neuroagents.

6. Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CN

Cindy Nguyen
June 27, 2003

Frantz Coby
FRANTZ COBY
PRIMARY EXAMINER